OHSU ABCD Study

Winter 2025 Family Newsletter

What's Inside?

- ABCD STUDY UPDATES
- Q & A W/ DR. HUBER
- TEAM SPOTLIGHTS: ABCD STUDY RESEARCH ASSISTANTS
- Q & A WITH DR. LOPEZ
- YOUTH RESOURCES & ABCD STUDY FINDINGS

OUR DEEPEST GRATITUDE TO ABCD PARTICIPANTS FOR YOUR ONGOING CONTRIBUTIONS TO SCIENCE!

OHSU ABCD Study Updates

ABCD Study families are helping us learn more about how the brain develops, with the ultimate goal of improving the health and well-being of youth now and in future generations! Keep making history with us. Your participation is important!

Dr. Bonnie Nagel, OHSU ABCD Study Director

How many families enrolled in the ABCD Study?

11,878 enrolled across 21 sites (see map below)

What year of data collection are we in?

We are now in Years 7 and 8 of follow-up visits, depending on when the family enrolled. Many ABCD participants are turning 18 and we are accommodating their scheduling needs as they move onto their next steps in life!

Rachel Flaherty, OHSU ABCD Study Coordinator

What is happening with all the data being collected?

The data are generating the biggest database ever on adolescent development and health.

How many publications are there on ABCD data?

Nearly 1,000 scientific papers have been published on ABCD Study findings.

Q & A w/ Dr. Rebekah Huber, OHSU ABCD Study Co-Director

QUESTIONS FROM ABCD STUDY PARTICIPANTS

How does the magnet scan the brain? The images are so detailed- is it because the brain and other parts of the body are made of different fibers or does the magnet recognize something else that translates to the image?

Magnetic Resonance Imaging (MRI) lets us see inside the brain with remarkable detail by using magnets and radio waves to measure the amount of water in different tissues. Since the body is about 65% water, MRI can detect a strong signal, which helps create highly detailed images. Water molecules (H2O) are made up of hydrogen and oxygen atoms. Each hydrogen atom has a proton in its center, which acts like a tiny magnet that spins around. To create an image, the MRI machine uses radio waves and causes the protons to realign with the magnetic field and release energy. Different brain tissues release different amounts of energy, and the MRI scanner detects this energy to produce a highly detailed image of the tissue inside the brain.

How do mental health diagnoses show and vary in MRI brain scans? Are there certain parts of the brain that are most impacted and do they vary in impact depending on the severity of the illness?

When looking at a brain scan for mental health conditions like depression or anxiety, an MRI might show small differences in certain brain areas, especially those that control emotions, like the amygdala and prefrontal cortex. However, it's important to note that an MRI alone can't diagnose a mental illness. There are many individual differences in brain structure and the brain is highly adaptive and can change due to many factors. This is complex area of research and scientists are continuing to study it.

What is the OHSU ABCD Study doing to engage the community in the ABCD Study?

Our Community Liaison Board (CLB) Advisory Group is made up of members from the community, including leaders in the fields of education, mental health, and addiction. The CLB aims to inform ABCD Study design and the translation of ABCD Study findings into real-world application.

OHSU ABCD STUDY TEAM SPOTLIGHTS

WHY DID YOU BECOME AN ABCD STUDY RESEARCH ASSISTANT?

ZAYNAB (SHE/HER): I became an ABCD Study Research Assistant because of the importance of this kind of research. Looking at cognitive neurodevelopment across different stages of life provides greater insight into how mental illness treatments, and even prevention, can be evolved to support children and adolescents in modern society. This is the kind of innovative research I wanted to contribute to.

ARTURO (HE/HIM): I became a Research Assistant with the ABCD study because it was a great opportunity to get involved in neuroscience research. I was fascinated with psychology and, in particular, neuroscience. So, it was a perfect fit!

JONAH (HE/HIM): I was looking to get into the psychology field right after graduating college, and I found the page for the Developmental Brain Imaging Lab that ABCD is part of and thought it looked like a really cool place to work! I was able to get in touch with Dr. Bonnie Nagel and chat about careers in psychology and developmental psychology as a whole. She told me about an opportunity to work on ABCD, and I knew I had to apply given just how impressive the scale of the project is, the importance of the work, and the opportunity to work in such a cool place!

SARAH (SHE/HER) : I became an ABCD Study Research Assistant because there is so much to learn about the brain! Having the opportunity to assist in data collection as a Research Assistant is an incredible experience that allows me to contribute to the advancement of our knowledge of the brain.

GLORIA (SHE/HER): I've always enjoyed research, and actually had a research major in college. When I graduated college, during the pandemic, I took a job near home as a secretary at an elementary school. I loved my job there, and still check in from time to time, but felt it was time to focus on something else. When I came across ABCD, it felt like a perfect fit! What's been most enriching about this job is getting to know you, the participants, and working collaboratively with the team to make this process as best for you as we can.

CLICK THE LINKS BELOW TO FIND OUT MORE!

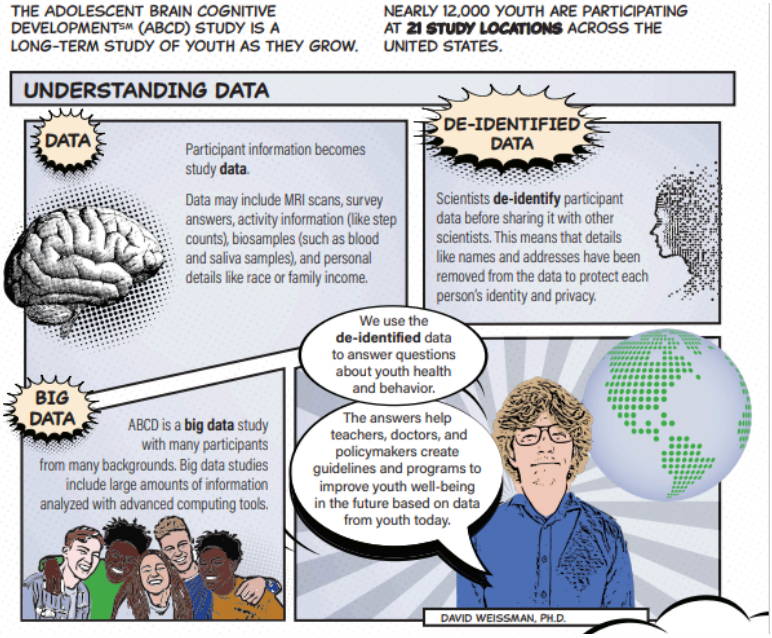
YOUTH RESOURCES

Resumes, Career Choices, & Financial Aid

Check us out on Instagram!

Check out our Facebook!

CHECK OUT THE ABCD INFO GRAPHICS ON SCREEN TIME, SLEEP, COVID, AND MORE!



ABCD STUDY FINDINGS

Satellite data linking environment to brain development

Teen snoring linked to behavior issues

Getting enough sleep linked to lower hypertension

Binge eating disorder and reduced reward responses in children

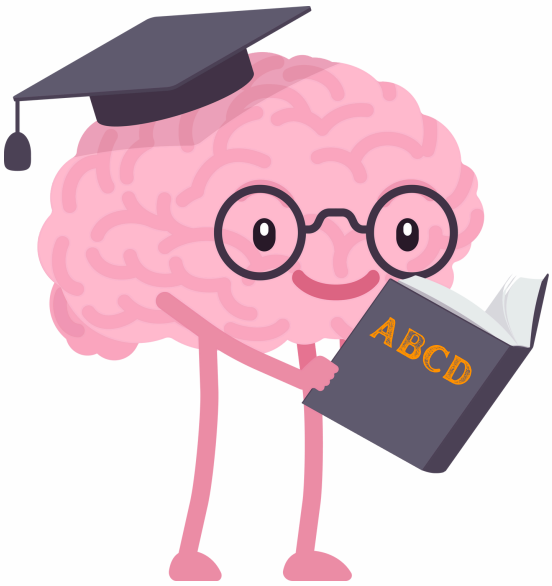
2025 ABCD ART CONTEST

Click here to submit your entry by 1/31

Learn more at ABCDstudy.org

Meet Dr. Daniel Lopez

Dr. Daniel Lopez
OHSU ABCD Study Postdoctoral Fellow



Can you introduce yourself and tell us about what you do at OHSU?

Hello, I'm Daniel A. Lopez, a 2nd-year postdoctoral fellow at OHSU. I am also an IRACDA scholar, a program designed to train postdocs for academic careers that blend research and teaching.

Why did you choose to work at ABCD?

My journey with the ABCD Study began during my first summer as a doctoral student. I worked with the Cognitive Neurophysiology Lab at the University of Rochester School of Medicine, one of the 21 ABCD Study sites. During that time, I started analyzing ABCD data and became familiar with the study. Since then, I've remained involved, contributing to ABCD workgroups and diving deeper into the study's data. My interest has always been in prospective cohort studies that collect mental health data, and the ABCD Study has been an ideal fit for my research goals.

What are you doing with the ABCD data?

My primary focus has been on understanding how digital technologies impact youth. For example, I recently published a paper on the longitudinal relationship between reward processing and gaming addiction symptoms within the ABCD Study. I'm also involved in analyzing retention data and advocating for transparency in how ABCD data is analyzed, both as a researcher and through my role in the study's workgroups.

How do you think your contribution is going to change our understanding of adolescent development?

As a co-chair of the JEDI Responsible Use of Data Workgroup, I aim to promote transparency and responsibility in the use of ABCD data, which can enhance the quality and reliability of research findings. From a broader perspective, I hope my research will inform public health efforts and guide parents in managing their children's use of digital technology. By focusing on actionable insights, I strive to improve adolescent health trajectories.

How is the ABCD data important to our understanding of youth as a whole?

The ABCD Study is invaluable because of its scale and longitudinal design. Large datasets that track individuals over time are essential for making robust claims about adolescent development. The study also captures critical events, such as the COVID-19 pandemic, allowing us to explore how these moments shape adolescent health. With each additional year of data collection, we gain stronger evidence to inform policies and interventions.

Do you have any future plans for ABCD Data?

I'm currently working on projects that focus on children with ADHD and how parenting practices around digital technology influence children's screen use over time. Additionally, I'm analyzing feedback surveys and other measures to improve retention efforts in the study.

Can you tell us a fun fact about yourself?

I have four cats ranging in age from 11 to 15 years old!